



7th October 2010

British English edition

Issue Number 129

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CYBER WARFARE AND IRAN

On 2nd October a government official in Iran announced several 'nuclear spies' have been arrested in his country. The official did not mention how many spies had been caught. Yet he did say their arrest was connected with a computer virus, or worm, called Stuxnet.

The Stuxnet virus was first discovered about four months ago. Computer experts say the virus is very complex. It seems to have been specifically designed to find and then disrupt a certain type of software made by Siemens, a large German engineering company. Siemens makes many parts and computer applications used in hospitals, large factories, and power stations throughout the world.

The name Stuxnet comes from some of the keywords discovered within the virus's code. The whole code has not been worked out yet. It's not known why it was made or who created it.

Experts believe the virus searches for a certain type of Siemens software. When it finds what it is looking for it disrupts whatever the software is controlling by making it malfunction. The worm is difficult to delete. It is also self-replicating. This means it can quickly reproduce itself as it spreads through a computer network.

Some people believe the Stuxnet virus is the first real example of 'cyber warfare'. This is an expression that describes how one country could attack another, not with weapons but by using specially designed viruses or computer worms.

Worms and viruses can be created for specific purposes. For example, they could be made to shut down electricity or water systems, to stop trains and planes, to prevent banks from supplying money or completing payments, or to disrupt mobile telephone connections and email

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traffic. Military computers could also be targeted.

Many countries, such as the USA, now take the threat of cyber warfare very seriously. They spend large amounts on security software to detect and stop possible cyber attacks. Large companies that run important services, such as electricity grids, protect their computer networks from becoming infected by viruses. The computers controlling important processes are not connected to the internet, as this would make them less secure.

Over the last few years Iran has had many disagreements with the USA and with several European countries such as France, Germany, and the UK. These arguments have been about Iran's nuclear activities. The USA and the European countries accuse Iran of developing nuclear weapons. Yet Iran insists this is not true.

Iran's president, Mahmoud Ahmadinejad, claims his country's nuclear programmes have been set up to generate electricity and for medical research. However, Iran has refused to let outside inspectors check all its nuclear facilities. This has made the USA and the European countries suspicious. They believe if Iran were to make nuclear weapons, it could be a threat to Israel and many other countries. In the past President Ahmadinejad has declared that he wants to destroy Israel. Israel is thought to have built its own nuclear weapons a long time ago. Yet it refuses to say whether this is true.

Iran has been one of the countries most badly affected by the Stuxnet virus. Officials have admitted computers in the country's Bushehr nuclear power station have been infected. This power station uses the Siemens programmes that the

Stuxnet virus seems to search for. The officials claim the virus has not caused any problems in the power station, which was built with help from Russia.

However, Iran has not said much about its Natanz nuclear facility. Iran only recently admitted this nuclear site existed. So some people believe Natanz is the place where work is being done to secretly create nuclear weapons. It's thought the Stuxnet virus may have seriously affected the Natanz nuclear facility.

Computer experts say the virus is very complex and seems to have been cleverly designed to spread and attack systems used in certain nuclear facilities. Some experts therefore suspect Stuxnet is a cyber warfare virus that has been created by a country that wants to deliberately damage Iran's nuclear activities. They believe the only countries with the technology to do this are the USA, the UK, and Israel.

The experts think USB memory sticks were first used to get the virus into Iran's nuclear facilities. Several memory sticks carrying the virus were purposely left by spies in places where people working at nuclear sites in Iran might find them. Eventually, a few were picked up. Later the people who found them plugged the sticks into work laptops or computers at Bushehr and Natanz. As soon as they did this the virus quickly spread throughout the nuclear sites' computer systems.

Iranian officials are angry about what has happened. They are sure the Stuxnet worm is a deliberate attack by other countries on their nuclear programme. The officials claim the virus will have been completely removed from all Iran's nuclear sites within the next two months. ■

NEW EARTH-LIKE PLANET DISCOVERED

At the end of September American astronomers using a powerful telescope in Hawaii announced they had discovered a new Earth-like planet. The planet is orbiting a star, or sun, called Gilese 581.

Scientists believe life is more likely to be found on rocky planets that orbit a star at about the same distance at which the Earth orbits the Sun. They have nicknamed this distance the 'Goldilocks zone' after a famous children's story. In it, Goldilocks tries some bowls of porridge belonging to three bears. One is too hot, another is too cold, and the third is 'just right' – not too hot and not too cold.



Artist's impression of Gilese 581 and Gilese 581g

Our Solar System has both rocky and gas planets. The rocky ones are Mercury, Venus, the Earth and Mars. Mercury and Venus are closer to the Sun than the Earth. So they are too hot to support life. The Earth is in the Goldilocks zone, where it's not too hot and not too cold for there to be liquid water. Scientists think for any complex forms of life to exist on a rocky planet, there must be water.

The Goldilocks zone depends on a sun's brightness. Gilese 581 is a red dwarf, so it's less bright than our own Sun. This means the Goldilocks zone of Gilese 581 is closer to it.

Planets that orbit a star outside our Solar System are known as exoplanets. European astronomers

NewsCAST

WHAT'S THE DIRTIEST? — A company that makes cleaning products has done a study to find out what the dirtiest item in most people's houses is. It picked 20 homes in each of a number of different countries and tested areas of the bathrooms and kitchens for bacteria and mould. The cleanest fridges were in Canada, but one of the dirtiest items was found to be kitchen towels. Company officials said kitchen towels in four out of the 20 Canadian homes they inspected had dangerous levels of bacteria. They recommended washing kitchen towels at a temperature hotter than 60°C (140°F) to kill all the bacteria.

discovered the first exoplanets orbiting distant stars in 1995.

The astronomers noticed some stars appear to 'wobble' very slightly when seen through a powerful telescope. They worked out the wobble is caused by the force of gravity of orbiting exoplanets. By measuring a star's wobble scientists can calculate how big the orbiting exoplanets are, and their distance from their sun.

Since 1995 almost 500 exoplanets have been discovered. Most are thought to be either gas planets or rocky ones not within their star's Goldilocks zone.

The astronomers have been studying Gilese 581's 'wobbles' for 11 years. They have found five exoplanets orbiting it. The recently discovered one, which is within the star's Goldilocks zone, has been given the name Gilese 581g. It is the second-furthest from its star.

The astronomers estimate Gilese 581g is about one and a half times the size of the Earth. The exoplanet travels around its sun once every

36.6 days, much more quickly than the Earth's 365.25 days. Another difference is that one side of Gilese 581g always faces its sun. So on this side it's light all the time while the other is permanently dark.

Astronomers believe that parts of Gilese 581g, close to where the 'light side' ends and the 'dark side' begins, could contain liquid water. If this is true they think the planet could support some forms of life.

Gilese 581g is about 20 million light years from the Earth. A light year is the distance light travels in one year, or about 9.5 trillion kilometres (six trillion miles). Even though Gilese 581g is a long way away the scientists say it's one of the closest Earth-like rocky planets discovered so far. ■

MASS VACCINATION IN ANGOLA

On 1st October, the World Health Organization (WHO) launched a new vaccination programme in Angola. The WHO's plan is for local doctors to vaccinate 5.6 million children against the polio virus.

The WHO is part of the United Nations (UN). It works with the governments of many countries, especially those that are poorer, to improve people's health.

Poliomyelitis, known as polio, is a virus that mostly affects young people. It can spread from person to person. A vaccine to prevent the disease was not readily available until the 1950s. Before this the disease paralysed many children. Now polio has been eradicated, or got rid of, in many countries.

The WHO has been working to eradicate polio completely. Yet the disease still exists in some countries. These include the Democratic

Republic of Congo, Nigeria, and Angola, in Africa.

There is more than one type of polio. Most cause few problems but one, called paralytic polio, is very severe. It gets into the bloodstream and attacks the nerves. This causes the person's muscles to be paralysed. It can even paralyse the muscles used to breathe in and out, so it can be very dangerous.

Polio vaccines can be swallowed and are often put inside sugar cubes, or a liquid. Most of us are given the vaccine, which is very successful in preventing the disease, when we are children.

In 2007 many young people in Angola began suffering from polio. Local doctors tried to make sure all the children in the country were vaccinated. However, the WHO estimates around 30% of them never received vaccinations. So the disease has continued to spread.



Children receiving polio vaccinations

The WHO's plan is to make sure every child in Angola is given a vaccination. It urgently wants to control the disease, as now there is a danger of it spreading to other nearby countries. The WHO says it's determined to get rid of polio throughout the whole African continent.

Polio vaccination programmes in other African countries have been very successful. Doctors say the number of cases of polio in Nigeria has dropped by 99% since 2009, when a similar vaccination

programme was completed. The WHO hopes its new vaccination plan will stop the spread of polio in Angola by the end of this year. ■

NORTH KOREAN LEADER-TO-BE?

On 28th September a group photograph appeared on the front page of a North Korean newspaper. The people in the picture are all members of the Korean Workers Party. What interested many, both in North Korea and around the world, was one of the people sitting in the front row.

Experts are sure the person sitting two places away from Kim Jong-il, the North Korean leader, is his third and youngest son, Kim Jong-un. If this is true, it is one of the first known photographs of the man expected to become the next leader of North Korea.

North Korea is a very secretive country. Some describe it as the last remaining Stalinist state in the world. The word Stalinist comes from the former Russia leader Joseph Stalin (1878 – 1953). He became a dictator who controlled Russia under very strict rules. People who criticised him were often sent to prison, or sentenced to death.

North and South Korea became separate countries after the end of the Second World War (1939 – 1945). In 1950 the Korean War began when the North invaded the South. The United Nations (UN) supported the South, while China helped North Korea. Most of the troops sent to help the South in the war were from the USA and the UK.

The Korean War ended in a truce in 1953. The place where the two opposing armies faced each other at



In the enlarged picture Kim Jong-il, the North Korean leader, is on the right and his son Kim Jong-un is thought to be the person on the left. The large picture on the building in the centre is of Kim Il-sung

the time is now the border between the two countries. Called the DMZ (Demilitarized Zone), it is one of the most **fortified** places in the world.

North Korea is a communist state, which has only one political party and no elections. The South now chooses its leaders by democratic elections. Today the South has one of the biggest economies in the world. The North is still supported by China, but it's a poor country and many of its people do not have enough to eat.

The first North Korean leader was Kim Il-sung. When he died in 1994 his son Kim Jong-il took over. Kim Il-sung is still a god-like figure to most North Koreans. There are many statues of him all over the country.

Kim Jong-il is now 68 years old and has been ill for some time. Many people have been wondering what will happen when he dies. He is known to have three sons, each with a different mother. Yet little is known about his children.

During the Workers Party meeting in September it was announced that the 28-year-old Kim Jong-un has been given several senior positions

in the party. He was also made a general of the army. Most people think this confirms he has been chosen to take over as the country's leader when his father dies.

The only other photograph thought to be of Kim Jong-un was taken when he was a teenager. Some experts in South Korea say he now looks quite different. They claim it's even possible arrangements were made for him to have surgery to make him look more like his grandfather, Kim Il-sung. ■

TOXIC SLUDGE

The government of Hungary declared a state of emergency in an area in the west of the country on 5th October. The previous day a dam that is part of a reservoir burst. About one billion litres (220 million gallons) of a red toxic mud-like sludge poured out of the reservoir.

The sludge reservoir is part of an alumina plant, or factory. The plant extracts alumina, used for making the very light metal aluminium, from bauxite ore. An ore is a type of rock that contains metals.

The extracting process at the factory creates the red sludge. It is mostly made up of water and bauxite, after the ore has been removed. But it also contains lead and other poisonous chemicals. As it is toxic, the sludge is kept in a special reservoir, or containment pool. It is not known why the reservoir's dam burst, but some people think recent heavy rains may have been the reason.



The sludge reservoir after the dam burst

The red toxic sludge flowed through four nearby villages. The flood damaged houses, bridges, and roads, and wrecked many cars. Officials say four people have died, over a hundred have been injured, and another six are missing.

Doctors have warned that the sludge can be poisonous if swallowed. They also say it can cause chemical burns on people's skin, and affect their eyes. Some of the burns might not appear until a few days after the person's skin comes into contact with the sludge.

Emergency workers have been sent to the area. Wearing special protective clothing, they have been evacuating people and trying to stop the sludge from spreading.

A government minister said the accident was an 'ecological disaster'. The sludge has already got into small local streams. Emergency workers are pouring plaster in the streams in the hope of stopping the contaminated water from flowing

into larger rivers. Some fear it may eventually reach the River Danube, which flows through Hungary and is one of the longest rivers in Europe.

A government official said cleaning up the mess would take over one year and cost a huge amount of money. An investigation will now take place to find out what caused the accident. Local people say they have been warning about the dangers of the sludge reservoir for many years. ■

GERMAN FIRST WORLD WAR DEBT REPAYED

During the weekend of 2nd and 3rd October Germany celebrated the 20th anniversary of its reunification, or the joining together of East and West Germany, in 1990. Over the same weekend Germany also repaid the final amount of the money it was ordered to pay after its defeat in the First World War (1914 – 1918).

After the First World War ended a treaty was signed by the winners and losers. Known as the Treaty of Versailles, it blamed Germany for starting the war. The treaty was named after the royal palace near Paris, the capital of France, in which it was signed in 1919.

The treaty stated that Germany would have to pay 132 billion gold marks. Today this amount would be roughly £241 billion (US\$382 billion). The treaty also said the German king, Kaiser Wilhelm the Second, was a war criminal. The money, known as 'war reparations', was to be used by the winners to repair war damage and to cover some of the cost of the fighting. It was agreed the money would be paid in instalments over many years.

After the war the German economy collapsed. Soon the country was unable to pay its war reparations. Later it was agreed the total amount would be reduced. Yet Germany still found it very difficult to pay.

Most historians agree the terms of the Treaty of Versailles, including the war reparations and the blame for Germany starting the war, helped Adolf Hitler's Nazi Party rise to power. When Hitler became the German leader he refused to continue to pay the war reparations.

In 1939 Hitler ordered his armies to invade Poland and the Second World War began. It ended with Nazi Germany's defeat by the Allies – the USA, the UK, Russia, and France, in 1945.



The signing ceremony of the Treaty of Versailles, in 1919

Germany was then divided among the Allies. East Germany became part of the Russian-led Soviet Union. The UK, the USA, and France occupied West Germany. This time these three countries did not demand any war reparations. Instead large sums of money were spent rebuilding West Germany. Most of this money came from the USA.

After the end of the war Germany continued to pay the instalments on the First World War reparations. In 1953 it was agreed that it had paid the full amount. Yet there was still interest to pay, of a total of about £108 million (US\$172 million).

It was agreed that this would have to be paid only if the two Germanys, East and West, were reunited. At the time most people thought this would never happen.

The two countries were eventually reunited in 1990. So from that time, the German government began paying off the final interest payment. It was therefore the last instalment of the interest payment that was repaid on 3rd October – 92 years after the end of the First World War. ■

ELECTION IN LATVIA

An election for Latvia's 100-seat parliament took place on 2nd October. A group, or coalition, of three political parties, called 'Unity', won 63 seats. This meant Unity's leader, Valdis Dombrovskis, will continue to be the country's prime minister.

Latvia is one of three small European countries often called the

Baltic States. The other two are Estonia and Lithuania. After the end of the Second World War (1939 – 1945) the Baltic States were occupied by Russia and became part of the Russian-led Soviet Union.

From 1945 until 1991 the communist leaders in charge of Russia controlled Latvia. The country became independent in 1991, soon after the Soviet Union collapsed, and began to organise its own elections.

Latvia has one 'house' of parliament, known as the Saeima. Elections take place every four years. After an election the president asks the leader of the party (or group of parties) with the most seats in parliament to be prime minister and form a government. In Latvia, the president is elected by the 100 members of the Saeima.

In 2004 Latvia joined NATO (North Atlantic Treaty Organization) and the European Union (EU). The country's economy began to grow very quickly.

However, Latvia was very badly affected by the money problems that began in many countries in 2008. The government and many people had borrowed a lot of money in euros. But Latvia's own currency, called the lat, lost much of its value compared to the euro. This meant many euro loans suddenly became much more expensive to pay back.

The Latvian government introduced a programme of **austerity** to save money. Workers' wages were reduced and taxes were increased. The country's second-biggest bank had to be saved, or bailed out, by the government. Many people lost their jobs. At the beginning of last year thousands of people demonstrated against the government's austerity programme in Riga, the capital city.

Soon after the protests Latvia asked for help from the EU and the International Monetary Fund (IMF). The IMF, which is based in the USA, is an organisation that will lend money to countries that have serious financial problems. In return the countries must follow very strict rules set by the IMF. The EU and the IMF agreed to lend Latvia €7.5 billion (£6.5 billion).



Valdis Dombrovskis, president of Latvia

In the election, opposition political parties argued against the rules being imposed by the EU and the IMF. But Mr Dombrovskis insisted they were necessary. Some people are therefore surprised at the election result. Yet others say it shows most people in Latvia understand that difficult decisions have to be made if the country's financial problems are to be solved. ■

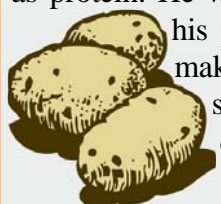
DID UFOs TURN OFF NUCLEAR WEAPONS?

On 27th September Robert Hastings held a special press conference in Washington DC, the capital of the USA. He claimed in the past there have been several occasions when UFOs were seen flying over military bases where nuclear weapons were kept.

UFO stands for 'unidentified flying object'. It describes something seen in the sky that cannot be identified as a plane or other man-made

NEWSCAST

NOTHING BUT POTATOES — An official in Washington state, in the USA, says he is about to start a new diet. The official is in charge of an organisation that promotes potatoes. He says he is tired of people thinking of potatoes as 'junk food', for example, as chips or crisps. To prove potatoes have good nutritional value he has decided to eat nothing else for 60 days. Potatoes, he says, contain several vitamins, and have lots of potassium as well as protein. He will cook some of his potatoes in oil to make sure he consumes some fat during his 60-day potato diet.



flying object. Some people believe UFOs are spaceships from other planets. People who claim to have seen UFOs usually describe them as bright lights, or as unusual circular or oval-shaped flying objects.

However, many say there is no scientific proof that UFOs exist. They insist that people who have seen UFOs are either imagining them or confusing them with a man-made flying object. Some who believe alien UFOs exist say many governments know about them, but they have kept the information secret on purpose.



A picture of what some people believed to be an unidentified flying object (UFO)

Robert Hastings is a UFO researcher. During the press conference he said he had spoken to over 100 people who served in the American military and claim to have seen UFOs. Many were working on military bases where nuclear weapons were stored. Seven former members of the United States Air Force spoke at the conference too. They said at times when UFOs were seen flying over nuclear weapon bases, the weapons were mysteriously switched off. The weapons, they said, were not damaged and could be switched on again later.

The incidents described happened many years ago. The members of the Air Force who spoke at the conference have now retired. Two of the incidents they talked

about took place in the USA and in the UK. The incident in the USA occurred in 1967. The one in the UK was in 1980, when American nuclear weapons were based in the country.

At that time the USA, together with many European countries, was an enemy of the Russian-led Soviet Union. The USA and Russia built an increasing number of nuclear weapons and many people feared a nuclear war would break out. This period was nicknamed 'the Cold War'. It eventually came to an end when the Soviet Union collapsed in 1991. Now Russia and the USA have made agreements to destroy many of the nuclear weapons built during the Cold War.

Mr Hastings believes there were friendly alien 'visitors' in the UFOs. He thinks they were trying to warn against the dangers of a nuclear war. Mr Hastings also believes similar UFO visits happened at nuclear weapons bases in Russia.

Officials working for the United States Air Force have said in the past they investigated all incidents where UFOs were seen near nuclear bases. They claim their investigations show that reported UFOs sightings never had any effect on the weapons at the bases. ■

IG NOBEL PRIZES

The annual Ig Nobel prizes were awarded at Harvard University, in the USA, on 30th September.

Every year since 1991 the American humorous magazine *Annals of Improbable Research* (AIR) has awarded these joke prizes to scientists who have published their work.

There are ten prizes. Each is for a different category such as medicine,

literature, physics, engineering, chemistry, and biology. The Ig Nobel prizes are a parody, or a joke version, of the famous Nobel prizes. The awards are called 'Ig Nobel' because it sounds like the word ignoble.

The Ig Nobel prize event takes place every year around the end of September and the beginning of October, or a few weeks before the Nobel prizes are announced. Nobel prizes were first awarded in 1901. They were named after a very wealthy scientist and businessman from Sweden, Alfred Nobel. He left a large amount of money to pay for the prizes after he died.

Each year Nobel prizes are given by the King of Sweden, in Stockholm, the Swedish capital city, to leading scientists and academics for their work. The award of one Nobel prize – the Peace prize – takes place in Oslo, the capital of Norway. This is given to the person thought to have done the most to promote peace in the world. Last year the Peace prize was awarded to Barack Obama, the president of the USA.

The AIR says it gives its Ig Nobel prizes for research or work that 'first makes people laugh, and then makes them think'. For instance, in the past Ig Nobel prizes have been given to scientists who studied why woodpeckers don't get headaches from the tapping they do, and whether dung beetles enjoy what they eat.

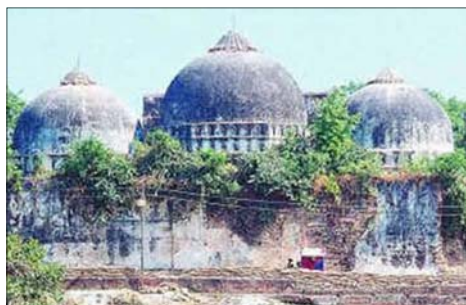
At the award ceremony a group of scientists was given the Ig Nobel physics prize for proving people are less likely to slip on an icy path if they wear their socks outside their shoes. The medicine prize was awarded to a study that showed asthma, an illness that causes problems with breathing, can be treated by riding on a roller



coaster. And the winner of the Ig Nobel Peace prize was a scientist who proved swearing very loudly helps to relieve the pain if you do something that hurts, such as hitting your finger with a hammer. ■

COURT ORDERS RELIGIOUS SITE TO BE SHARED

On 30th September a court in India announced its ruling on a religious site in the ancient town of Ayodhya. The court's three senior judges declared that the site will have to be shared by Muslims, Hindus, and the Nirmohi Akhara, a Hindu organisation. The ruling came after an eight-year investigation about the ownership of the site.



Babri Mosque, before it was destroyed in 1992

Ayodhya is a town in the north of India. The disagreement of who owns the religious site in the town has led to many protests and violent demonstrations.

India, Pakistan, and Bangladesh were once all part of a large British colony known as 'India'. In 1947 the colony was split into two independent countries. India was the largest, where most people were Hindu. The other, Pakistan, had a Muslim majority. At the time Pakistan also included Bangladesh, which was then known as East Pakistan. The split, known as Partition, led to many acts of violence between Muslims and Hindus.

Today just under 1.2 billion people live in India. Roughly 800 million are Hindus. Most of the others are Muslims. India therefore has the third-highest Muslim population in the world.

The religious site in Ayodhya was once the site of the Babri Mosque. Parts of the mosque dated back to the 1520s. Then a Muslim Emperor, who arranged for the mosque to be built, captured this part of northern India.

However, Hindus claim the Babri Mosque was built on the site of a very ancient Hindu temple. They say the temple marked the birthplace of Lord Rama, an important Hindu god.

The dispute over the religious site has been going on for a long time. British officials once divided the mosque into two areas, one that could be used by Muslims and the other by Hindus. More recently the building was simply kept locked and nobody was allowed to enter it. In 1992 a Hindu group broke into the mosque and destroyed all its buildings. This led to rioting in many Indian towns and cities. During these riots an estimated 2,000 people died.

The Indian government sent 40,000 armed police to Ayodhya just before the court announced its decision. It was worried that the court's judgment could lead to more religious violence. Police forces in other parts of India were ordered to stop any demonstrations or protests.

The court arranged for archaeologists to investigate the site. The archaeologists claimed to have found ancient remains of a Hindu temple. But other experts were not so sure. Some people believe ancient writings show Lord Rama was born 'on the banks of the River Ganges'. Ayodhya is on the River Saryu. This,

they say, means it's unlikely there was a temple on the site dedicated to Lord Rama.

There was no rioting after the court's ruling that the religious site must be shared. Some people think this shows India is a more secular country than it was around 20 years ago. Yet leaders of the three religious groups that dispute the site immediately said they would make an appeal. This, legal experts say, could mean the argument will continue for many more years. ■

NEW COMIC BOOK HERO

An organisation in the USA has announced it is going to produce an unusual new series of comic books. Recently, it released pictures of the comic book's first superhero – the Silver Scorpion.



Silver Scorpion superhero

The Silver Scorpion can use the power of his mind to control metal. Like other superheroes he will use his special powers to fight for equality and justice. The big difference between the Silver Scorpion and other comic and film superheroes is that he has been 'designed' by a group of young people with disabilities from the USA and Syria.

The new comic book is the idea of an American philanthropist and businessman, Jay T. Snyder. Mr Snyder has recently set up an organisation called the Open Hands

Initiative. He wants the organisation to encourage international communication and friendship. Mr Snyder's plan is for the Open Hands Initiative to arrange exchanges and meetings among young people from different countries. This, he believes, will help them to understand each other and learn about what everyone has in common.



Syrian and American teenagers meeting in Damascus

To 'design' a new superhero Mr Snyder arranged for a group of American teenagers with disabilities to fly to Damascus, the capital of Syria. There they met a group of young Syrian people, who also have disabilities. The teenagers talked about what they would like to see in a new superhero and the powers he or she should have.

The two groups of teenagers then came up with the Silver Scorpion idea and the background story. The Silver Scorpion is a Muslim boy who uses a wheelchair. He lost the lower parts of his legs in a landmine accident. The boy becomes the Silver Scorpion after he discovers he has powers to manipulate metal.

The comic book company says the young people wanted to make sure the superhero's power was not something that 'cured' his disability. This is because they do not see disability as a weakness or something that needs to be 'fixed'.

The new comic book will be printed in English and Arabic. The

first issue is due to be published in November. There are plans for more issues in the series. Each will have a different international superhero.

Mr Snyder believes every country has things it can either teach, or learn from, others. He says it's important to remember the Open Hands Initiative is not just taking American ideas to other countries, but about young people working in partnerships. Mr Snyder says countries working together can help people to trust and understand each other more – in other words, the things for which the new comic book superheroes are fighting.

The Silver Scorpion's story will be printed and made available digitally by a Syrian comic book company. ■

CHINA'S ONE CHILD POLICY

The 30th anniversary of the Chinese government's policy of families being allowed to have only one child was on 25th September. When the policy began the government said it would last for 30 years. Yet earlier this year, officials declared the rule will continue for at least another five years.

The rule of one child per family applies to people living in the towns and cities. In the country, families are allowed to have another child if the first is a girl.

If parents have more children than allowed, they have to pay a large fine. It can be as much as 200,000 yuan (£18,800). Officials can also visit a parent's workplace and persuade the company to take away the parent's job.

Many women who already have the allowed number of children and become pregnant either agree, or are forced, to have an abortion. It's

estimated about 11 million abortions happen in China every year.

When the one child policy began, China's huge population was growing very quickly. The country was poor and most people lived on small farms. Many were worried there would not be enough food for an ever-increasing population. Officials claim the one child policy has prevented 400 million births over the last 30 years.

Even with the one child policy China's population of around 1.3 billion is still the biggest in the world. India, with just under 1.2 billion people, is second.

China has become one of the world's fastest-developing countries. Today, the only country with a larger economy than China's is the USA.

Chinese government officials claim the one child policy is one of the main reasons for this rapid economic development. Without the policy, they say, there would have been serious food shortages and not enough jobs for everyone.



One child per family policy poster from 1980

Others disagree. They believe the one child policy has caused problems for the country. Some worry that many single children have been too spoilt by their parents. They also wonder if having the majority of children growing up without sisters or brothers might cause social problems in the future. And, instead

of having help from brothers and sisters, one child will now have to look after his or her mother and father and both sets of grandparents, as they get older.

Some of China's families still prefer to have sons and not daughters. If a woman knows she is expecting a girl there is a greater chance she will agree to an abortion. This means more boys than girls are being born. Already it's thought there are 24 million more Chinese men under 30 years of age than women.

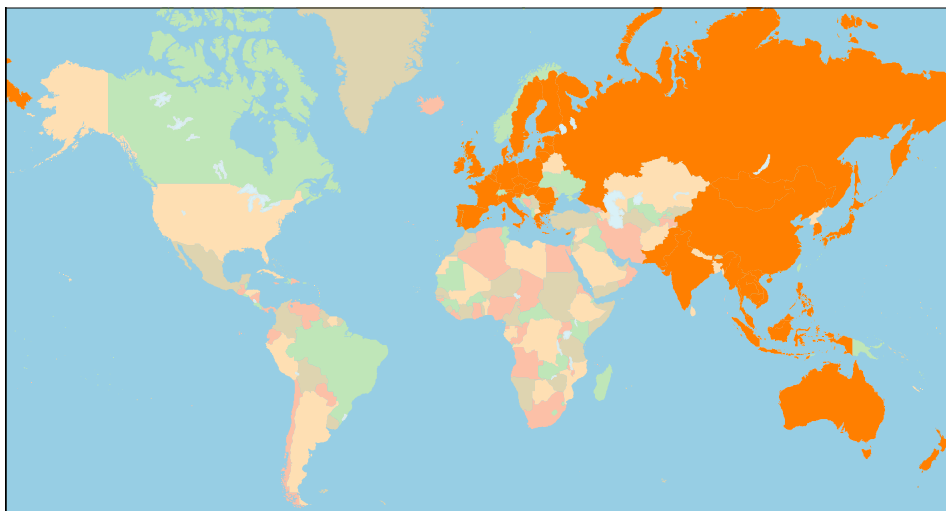
China's population is now becoming much older. Within ten years the average age in China is expected to be 37, while India's will be 29. The working population in China will also start to decrease. After 2025 there will be ten million fewer workers every year, as older people retire. This is one reason why some experts believe India's economy may eventually overtake China's.

Recently, many people in China were expecting the government to change the one child policy to two children per family. Yet this is now unlikely to happen before 2015. ▣

ASEM

The 2010 Asia-Europe Meeting (ASEM) was held in Brussels, the capital of Belgium, on 4th and 5th October.

The ASEM is an international [forum](#). This is an event at which member countries' leaders can have open discussions about important matters. The ASEM has 46 member countries. They are made up of the 27 members of the European Union (EU), ten members of the Association of Southeast Asian Nations (ASEAN), and China, Japan, South Korea, Pakistan, Mongolia, and



► ASEM member countries

India. Three new members – Australia, New Zealand, and Russia – joined the ASEM this year.

The population of all the ASEM member countries is roughly 60% of the world's total. They are also responsible for 60% of all the world's trade.

The first ASEM took place in 1996. The meetings, or forums, happen every two years and [alternate](#) between Asia and Europe. The last ASEM meeting was held in 2008, in Beijing, the capital city of China.

During the ASEM many countries hold separate talks with one another. These smaller discussions, between two countries, are often called bilateral talks or bilateral meetings.

Representatives of each country at the ASEM discussed trade and economic problems. Talks were also held about climate change, nuclear weapons, human rights, and the spread of terrorism. The day after the meeting the EU and South Korea signed a new agreement that will make it easier for EU member countries to trade with South Korea.

Naoto Kan, the prime minister of Japan, and the Chinese premier, Wen Jia-bao, both attended the forum. These two countries are currently arguing about who owns

several small rocky islands in the East China Sea. The islands are important as it is thought there are oil and gas fields under the seas close to them. Whoever owns the islands will own any oil or gas found there in the future.

All countries attending the meeting agreed to criticise North Korea for its sinking of a South Korean navy ship last March.

The next ASEM will be held in Asia, in 2012. ▣

NEWSCAST

EXTRA INGREDIENT — A man in the UK has received more than £16,000 (US\$25,400) from a bread making company. The man had been making sandwiches for his children when he saw a dark spot in the loaf of bread he was using. He thought it was some un-mixed dough, but when he looked more closely he noticed the dark spot was actually the fur of a dead mouse squashed into the loaf. The company gave him the money as [compensation](#). He said he had continued to make sandwiches for his children from a different loaf of bread, but felt too sick to eat any himself.

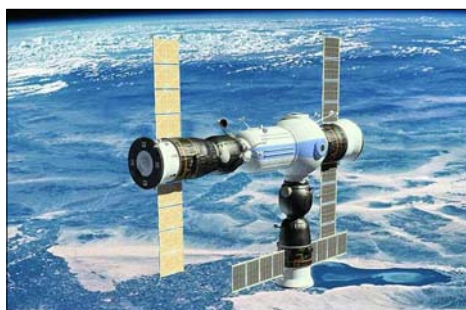
SPACE HOTEL

A Russian company, Orbital Technologies, has announced it plans to build and run a space hotel that will orbit the Earth.

The company says Energia, an organisation partly owned by the Russian government, will assist it with building the hotel. Energia has been helping to build the International Space Station (ISS). The ISS is a spacecraft that has been in orbit around the Earth for over ten years. It is an international project run by the space agencies of the USA, Russia, Europe, Japan, and Canada.

Astronauts from different countries travel to and from the ISS by either Russian Soyuz rockets or American space shuttles. The astronauts stay at the ISS for different periods of time, from a few weeks to many months. While staying in the ISS they live and carry out experiments in zero gravity.

The world's first space tourist was a rich American businessman called Dennis Tito. He stayed in the ISS for a few days in 2001. Since then several wealthy people have agreed to pay large amounts of money for the experience of going into space and visiting the ISS.



Artist's impression of space hotel

Last year, the first aircraft specially designed to take tourists into space was tested in the USA. A company owned by Richard Branson, a businessman from the UK,

built it. Mr Branson says he wants to make space tourism more popular. The aircraft will take off from the ground, fly into space for a few hours and then return. The aircraft is now being tested. The first passenger flights are planned for 2012. The cost of tickets – which are already on sale – is US\$200,000 (£126,000).

Orbital Technologies plans to build a four-cabin space hotel to begin with. It says the space hotel will not be as cramped as the ISS. This, it says, is because the hotel will be a place where people pay to go for a 'zero gravity holiday' and not to work as the astronauts on the ISS do. The company says the cabins will have porthole-style windows. Through these, guests will be able to look down at the Earth as the hotel orbits it. Space tourists will travel to and return from the hotel in the same Russian rockets that take astronauts to the ISS.

The company says the hotel will orbit close to the ISS. It's possible, it says, the hotel could be used as a stop-off point for future space tourists who want to fly all the way around the Moon.

The company is looking for [investors](#) to help pay for the building of the space hotel. It says some have already agreed to do so. The hotel is not expected to be operational before 2015. However, company officials say they want to start working on the plans now, as they predict space tourism will become very popular in the future. ■

FOSSIL SUNFLOWER

Scientists have announced the discovery of a 50 million-year-old fossilised flower in South America. They say it has helped them learn

NewsCAST

ICED TEA ARREST — An armed robber in the USA was caught after he accepted a drink of iced tea. The man went into a shop and demanded the workers give him the money in the till. He pointed a gun at them. The workers said they immediately pressed a special emergency button in the shop that alerts the police to robberies. Yet as the gunman did not seem very threatening they told him to calm down and have a drink of iced tea. The gunman did so, and the police soon arrived. When they arrested him they discovered his gun was a toy.

about the origins of our modern sunflowers, dandelions and daisies.

The flower fossil is very unusual because it is so complete. The scientists say most fossils of this family of flowers – called *asteraceae* or aster daisy – are just grains of pollen, and not leaves, stems, or petals. This is especially true of fossils that are this old. So far, the only complete flowers found have been much newer fossils. But the recently announced discovery has two complete flower heads with the petals. Even the seeds can be clearly seen. The seeds have 'wings', so they may have been blown along by the wind.

The fossil was discovered in the southern part of Argentina. This area is part of a region called Patagonia, which is well-known for fossils. Patagonia includes the most southerly areas of Argentina and Chile. The palaeobotanists – scientists who study prehistoric plants – say this area was once much warmer, with temperatures of around 20°C (68°F).

Until now, palaeobotanists had used other fossils and their knowledge about similar plant species to make guesses about the origins of the aster daisy family. They believe the flowers are one of three families of plants that originally grew in Antarctica, millions of years ago. At that time Antarctica had a much warmer climate than it does now. Scientists think as Antarctica started to get colder, between 55 million and 20 million years ago, the plants began to slowly move north where the temperatures stayed warmer. The new fossil discovery, say scientists, seems to confirm this is what happened.

The *asteraceae* flower family includes more than 20,000 different plants. Some examples are chrysanthemums and marigolds. Experts say today the aster daisy is one of the Earth's most widespread

flower families. However, scientists do not know much about where aster species originated, or how they came to spread around so much of the world.



Fossilised flower

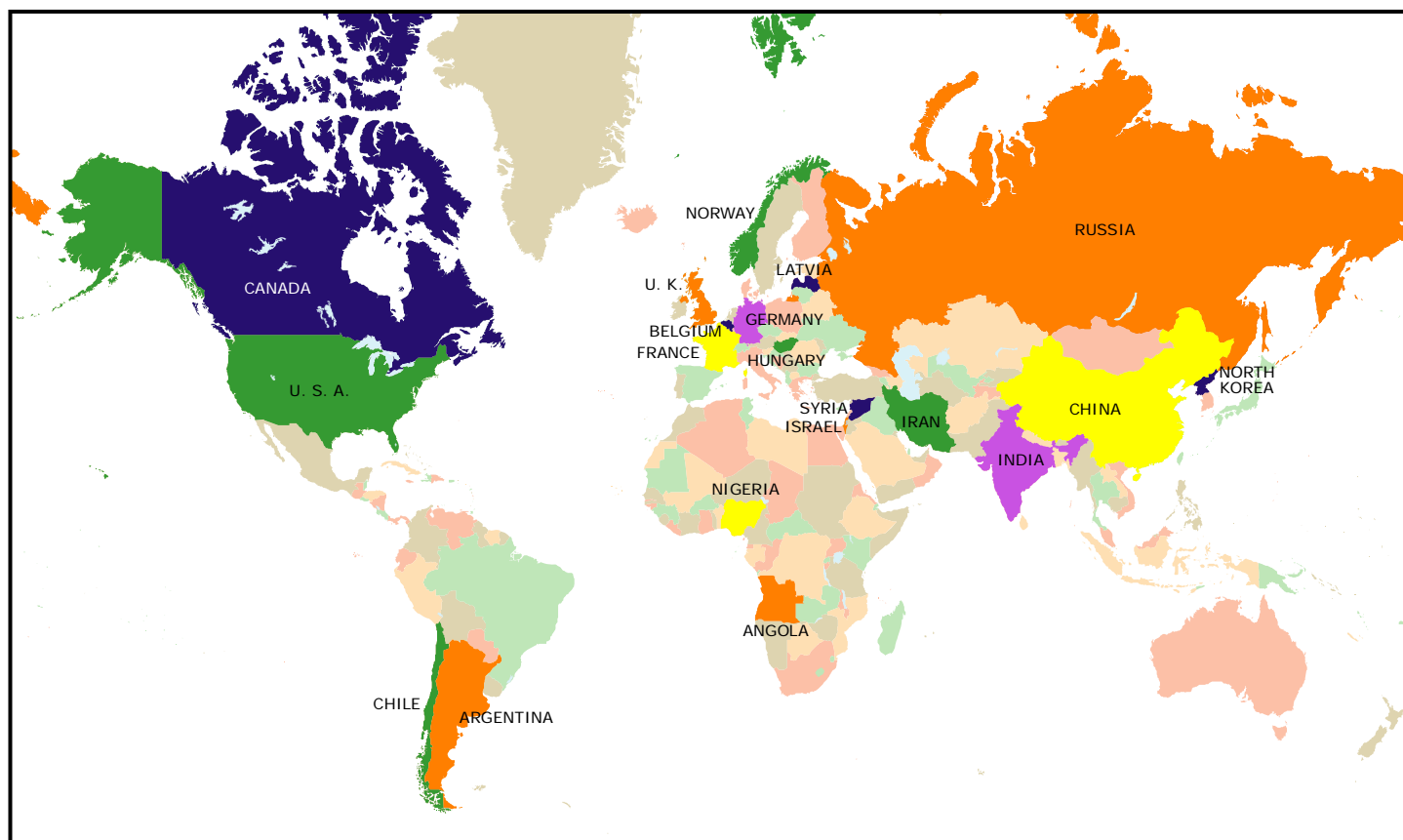
The scientists hope their new discovery will help them answer some of these questions. The fossil is the oldest complete one of this flower family to be found. The Argentine scientists who found it claim the discovery is as important as that of the very first dinosaur fossil. ■

FREE FIZZY FOUNTAIN

A water company in France turned on an unusual drinking water fountain in Paris, the capital city, on 28th September. The water that comes out of the fountain is fizzy.

The new free drinking water fountain is part of the company's plan to encourage people to drink less bottled water. The company wants people to understand tap water is just as good and clean as water sold in plastic bottles. It is also, the company says, much more environmentally-friendly.

The new fizzy water fountain is in a public park in the city. Carbon dioxide gas is injected into the fountain's ordinary tap water supply. This makes it fizzy, or carbonated. The water supply is also cooled so the drinking fountain produces chilled fizzy water. Carbonated



water sold in bottles is very popular in France.

Environmental experts say people in France are the world's eighth-biggest buyers of bottled water. Many countries have begun to advise people that drinking tap water is much better for the environment than buying bottled water. This is because factories making the bottles use a lot of energy and plastic bottles do not rot when they are thrown away. Plastic rubbish, environmentalists say, is an ever-increasing problem.

Many people have now begun to carry their own water bottles, which they keep filling up from a tap at home. In some towns, such as Manly, in Australia, there are places where people can refill their bottles with the town's tap water. Yet the fountain in Paris is the first place in the world where people can get free carbonated tap water.



New fizzy water fountain, in Paris

At the moment, there is only one fizzy fountain in France. It is also possible to get non-fizzy, or still, tap water from the same drinking fountain. People can also choose whether they want their water chilled.

The company says it will check on how many people use its new fountain. If it is very popular the company may set up more fountains in other public places in Paris. Critics say most people are unlikely to travel to the park from far away to get free fizzy water when they can buy a bottle at a nearby shop.

The new fizzy water fountain has been nicknamed 'La Pétillante', or 'the sparkling one'. ■

WATER STRESS

A team of scientists has recently released its research on all the world's rivers. The study claims the water security of many countries is under threat.

The scientists looked at the effects humans have on the world's freshwater supplies. This includes man-made dams, canals, reservoirs, [irrigation](#) systems, and pollution. The study says large parts of every continent – especially Europe, North America and Southeast Asia – are under water stress.

Water stress is a term used when the demand, or need, for water is greater than the supply available. This may be due to droughts. Or it can be because the available water is [contaminated](#), making it unsafe to use and drink.

Places and people can also be under water stress even though water is available. This can happen when governments do not have money to build the right infrastructure, such as pipelines and treatment plants, to make sure everyone has access to clean water. 'Water security' describes a situation where everyone has enough water.

Most of the Earth's surface is covered in water. Yet only about 3% of all the Earth's water is freshwater that humans can use and drink. The remainder is saltwater.

Humans need water to survive – not only for drinking, washing, and cooking, but also to keep farms and factories running. Agriculture, or farming, uses a large percentage of the Earth's freshwater.

The study also says humans' efforts to make sure they have water security is threatening the [biodiversity](#) of many of the Earth's rivers. Building dams and reservoirs has greatly improved the water security of around 850 million people. Yet the study warns these types of projects can destroy the habitats of various animal and plant populations.



Dried-up river in Africa

The water stress study says the least-threatened rivers in the world are those in parts of northern Canada and Scandinavia. ■

FLAPPING PLANE

Todd Reichert, a university student from Canada, has made the world's first successful flight using a human-powered plane with wings that flap like a bird's. The unusual plane, which does not have an engine, is known as an ornithopter. 'Ornis' means 'bird' in Ancient Greek.

Humans have been trying to copy the way in which birds fly for hundreds of years. Leonardo da Vinci (1452 – 1519), a famous Italian inventor, scientist, mathematician, and artist, drew several designs for flying machines with wings that flapped. However, none of his designs was ever built.

The first planes that could fly were not built until the early 1900s. Like modern aircraft they did not take off

NewsCAST

UNLIKELY PASSENGER — Railway officials in Canada were surprised to find a strange passenger on board a train arriving in the city of Winnipeg, after a 12-hour journey. A black bear cub had become tangled up in the cables underneath the train and had got its head stuck in a small hole in the train's floor. The trapped cub travelled hundreds of kilometres underneath the train before it was discovered. Wildlife experts drugged and freed the bear cub. It was then kept in a cage for a day to rest. Later the bear cub was released into a forest park.

in the same way that birds do. Modern planes fly because of the way in which their wings are shaped. There are several forces acting on a plane all the time. The downward force is gravity. This makes the plane 'want' to stay on the ground. The upward force is called lift. For the plane to take off – and to stay in the air – the lift force must be greater than the gravitational force.



Snowbird

When a plane speeds along a runway, it pushes through the air. Air rushes over the top of, and underneath, the wings. The shape of the wings makes the air across the top move more quickly than the air below them. So the pressure under the wings is greater than the pressure on

top of them. The lifting force therefore becomes greater than the force holding the plane down. This is how the plane takes off and stays in the air.

Mr Reichert says he and his team were inspired to build the plane by some of Leonardo da Vinci's drawings. On its first flight, the flapping plane, nicknamed Snowbird, flew 145 metres (476 feet) in just over 19 seconds. At first a car towed the Snowbird along to give it enough speed to lift up into the air. Then Mr Reichert used foot pedals inside the craft to keep the wings flapping.

The Snowbird has a similar wingspan to that of a large passenger plane – over 30 metres (98 feet). But it weighs only just over 43 kilograms (95 pounds). Mr Reichert even lost some weight before he made the flight, so the plane and its pilot would weigh as little as possible. He also did a lot of training to make sure his leg muscles were strong enough to keep powering the plane's long flapping wings.

Mr Reichert admits his unusual plane has no real practical use. However, experts say the flapping plane's flight was an important moment in the history of aviation technology. ▣

ICE PATCH ARCHAEOLOGY

Archaeologists working in Norway say they are in a race against time. Global warming, they claim, has become both their best friend and their worst enemy.

Most scientists agree global warming caused by human activity is one of the main reasons for the melting of ice at the North and South Poles and in high mountain

ranges. They blame the burning of fossil fuels – oil, gas and coal – which release carbon dioxide into the atmosphere. The increasing amount of this gas, they say, is now acting like a greenhouse and causing average world temperatures to rise.

The Norwegian archaeologists have been working in some of their country's highest mountains. There an ice field, called Juvfonna, has shrunk by around 18 metres (59 feet) during the last 12 months. The melting ice field has begun to expose, or uncover, ancient man-made objects preserved for thousands of years. These include 1,500-year-old arrows, wooden sticks used in hunting reindeer, and even leather shoes.



Ice field in Norway

The archaeologists admit it's exciting to be able to find so many well-preserved items. But they worry about the problems caused by the rapidly-melting ice.

Once the ancient items are uncovered and exposed to the air they quickly begin to fall to pieces. This is especially true of organic materials such as wood or leather. So many of the ancient objects are being uncovered, the archaeologists say, that they cannot find and collect them all in time. Experts say wooden items will decay within a few years after the ice that has covered them for such a long time melts. But skin, feathers and leather will rot away much

more quickly, sometimes within a week.

To preserve the objects, the archaeologists need to move them carefully from where they have been found and put them into special freezers. Their recent work in Norway has been nicknamed 'ice patch' or 'snow patch' archaeology. ■

MOSCOW MAYOR LOSES JOB

On 28th September many Russians were surprised to find out the mayor of Moscow, the country's capital, had been sacked, or fired. Yury Luzhkov had been mayor of Moscow for 18 years. He was dismissed by Dmitry Medvedev, Russia's president.



Yury Luzhkov, former mayor of Moscow

Mr Luzhkov was elected just after the Russian-led Soviet Union collapsed in 1991. He was elected three times in a row. At each election he got more than 70% of the votes. Until he was fired, he was the only remaining Russian political leader to have been in his position since the collapse of the Soviet Union.

In 2004 the president of Russia at the time, Vladimir Putin, abolished certain local elections. These included the election for mayor of Moscow. Now the president of Russia selects someone for the job and the people who live in the city no longer elect their mayor.

Mr Putin stepped down as the Russian leader in 2008. He had been president for eight years. He now holds the position of prime minister. Even though Mr Putin is no longer president many people think he still runs the country and makes all the important decisions.



Christ the Saviour Cathedral, in Moscow

Mr Luzhkov, who is now 74 years old, is well-known throughout Russia. His wife, Yelana Baturina, is the boss of a large building company and is thought to be the richest woman in Russia.

When Mr Luzhkov became mayor in 1992 Moscow was an unattractive city. Many of its buildings were badly designed and constructed. Mr Luzhkov changed this. He had older buildings knocked down. New modern shopping centres and high-rise blocks were built in their place.

Mr Luzhkov's wife's company controlled most of the building work. This led people to accuse Mr Luzhkov of being corrupt. They suspected he had unfairly arranged for most of the new building work to be done by his wife's organisation instead of selecting other construction companies.

Mr Luzhkov pleased many older Russians by rebuilding Moscow's Orthodox Christ the Saviour cathedral. The original Cathedral was built in the 1850s. It was blown up and destroyed on the orders of Joseph Stalin, the Russian communist leader, in 1931.

President Medvedev said he dismissed Mr Luzhkov because he had lost confidence in him as the capital city's mayor. The men have had several disagreements over the last few months.

In the summer, Moscow suffered a record heat wave. At the same time it was covered in smoke from wildfires burning in the surrounding countryside. Mr Luzhkov was on holiday at the time and refused to go back to Moscow during the crisis.

More recently the president stopped Mr Luzhkov's plan to build a new motorway from Moscow to St Petersburg through an area of unspoilt forest. Mr Luzhkov then wrote a newspaper article criticising the president.

Mr Luzhkov is a founding member of the United Russia political party. Both President Medvedev and Prime Minister Putin are members of this same party. On 4th October Mr Luzhkov announced he would leave United Russia and start a campaign for better democracy in the country. Meanwhile President Medvedev will now have to appoint a new mayor of Moscow. ■

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Editor: Amber Thody

Acknowledgements:

News story photographs by gettyimages

Graphic for book review courtesy of
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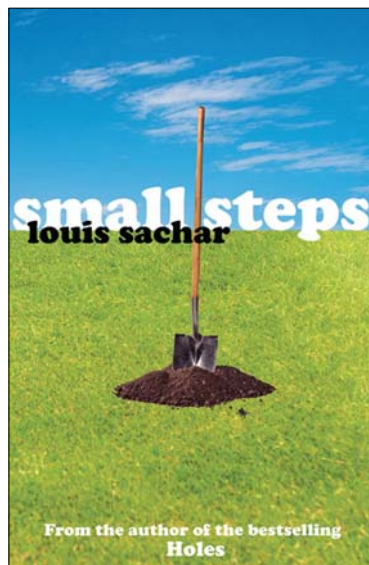
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B O O K R E V I E W

HAVE YOU READ ...?



shovel. He also learnt how to set his tasks and prioritise them. For example, one of his goals is to save money, but his first goal in life is to earn his High School Diploma.

Small Steps starts out with him working to attain those goals. He has found a job in landscape architecture. It's a nice way of saying he is digging holes again, but at least this time he is getting paid for it.

Theodore also has an alias, or nickname, from Camp Green Lake. His alias is 'Armpit' because of a scorpion that bit him under his arm. Losing the nickname Armpit forever is another of Theodore's goals – although one of the last ones on the priority list.

I think Theodore is basically a very good guy. Unfortunately, his parents don't have much faith in him. For instance, they often require him to do a urine test at home to check for illegal drug use. I can sympathise with his parents' fears, because they lost Theodore's older brother to a federal prison for drug trafficking. But I cannot see why they don't also show Theodore some positive encouragement and support.

The only person who truly believes in him is Ginny, a young girl who lives next door. Ginny is my favourite character in this story. She has an inner strength and determined spirit that together make her disability, cerebral palsy, seem more like a minor nuisance.

One day one of Armpit's friends from Camp Green Lake, X-Ray, shows up with a quick money-making

Theodore Johnson has not been a lucky teenager so far in life. As a young teen he got into a fight over a spilt bag of popcorn in a cinema. He won, even though his adversaries were older than him. But because he severely injured one of them, Theodore was sent to a juvenile correctional facility, Camp Green Lake.

There he learnt a vocation, a work-related skill: how to dig a hole with a

scheme. All he needs to do is borrow some money to get it started..!

The story gets even more interesting when a third character is introduced – teenage pop star Kaira DeLeon. She doesn't have any friends and her parents micromanage everything she does. And until she turns 18, Kaira won't have much say in the matter. She has shown some interest in learning how her career is being managed, but her parents won't even let her know how much money she is earning. She thinks it must be a lot, because her mum wears new clothes every day and her dad has more glittering jewellery on him than most Christmas trees.

At one of Kaira's concerts she hears about a strange commotion in the audience – a fight between the police, and a young girl and her older friend. Kaira decides she is going to meet this strange couple for herself. What happens next can only be described as both a young man's dream come true and his worst nightmares run amok.

Louis Sachar does everything to make this story both very entertaining and very realistic. I often found myself wondering if I would have reacted any differently to the situations in the story. I usually found myself agreeing with the questionable actions taken!

Small Steps is the sequel to *Holes* (reviewed in Newsademic issue 115). You may read this book by itself, since Armpit is not the main character in the first book, or you could start with *Holes* to discover what went on at Camp Green Lake. This book is best suited for readers aged eight and up.

Small Steps by Louis Sachar. Bloomsbury UK; Random House USA

Reviewed by **Chris Tarn**

WANT US TO REVIEW A BOOK THAT YOU HAVE READ AND ENJOYED?

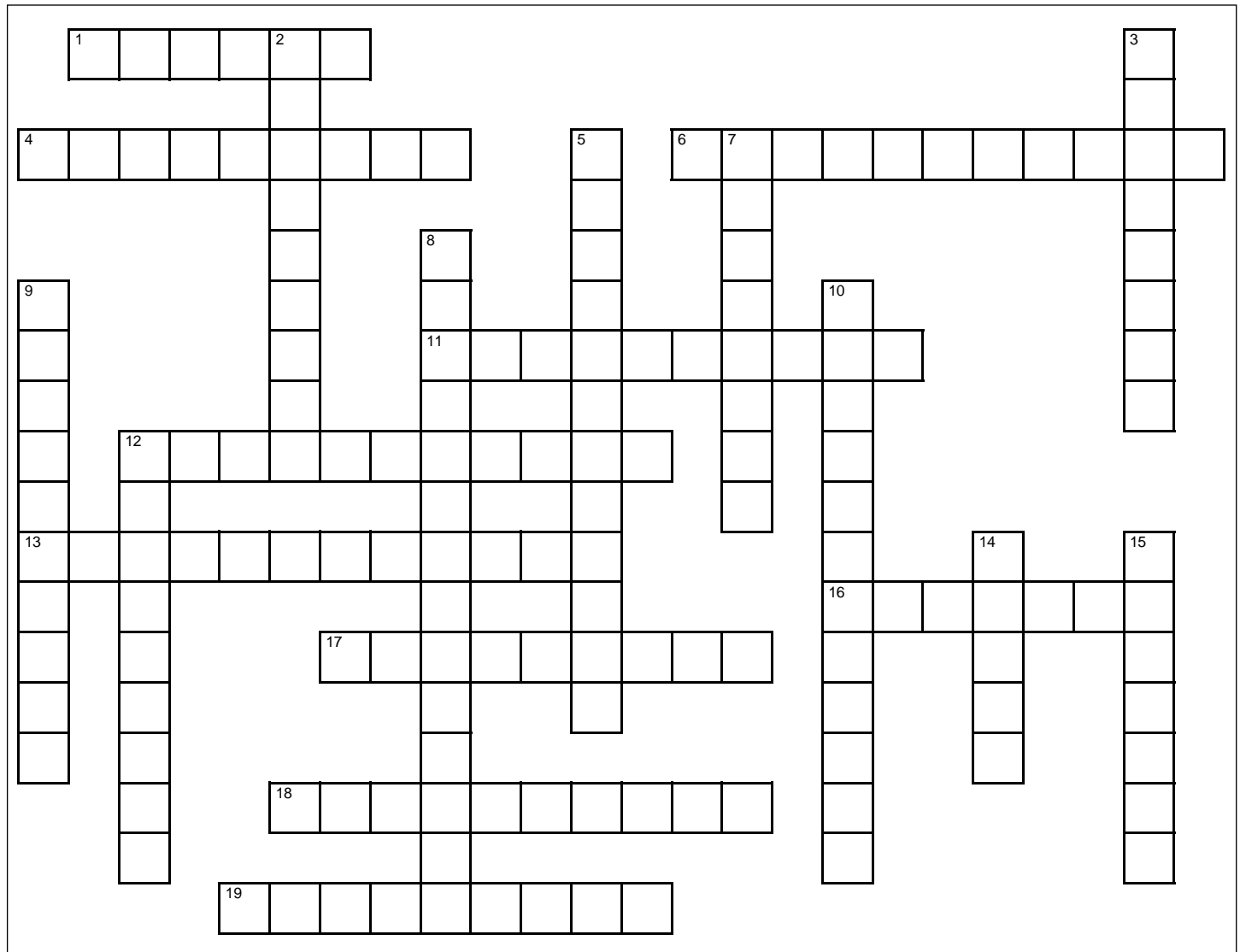
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Complete the form and tell us why you enjoyed the book. If we review your choice, we'll mention your name and include some of your comments.

GLOSSARY

PRIZE COMPETITION

INSTRUCTIONS: ① Complete the crossword. The answers are highlighted in orange in the news stories. There are 25 words highlighted and you need 20 of them to complete the crossword. ② Once you have solved the crossword find the 20 words in the word search on the next page ➡



Across

- 1 Noun** Formally asking for a legal decision to be changed
4 Noun (Plural) People who are willing to commit money to something with a plan to make a profit
6 Verb Failure, or fail to work properly
11 Noun The artificial watering of land
12 Noun (Plural) Opponents or other contestants
13 Noun (Plural) Health problems that affect a person's brain, body, or senses
16 Adjective Dishonourable or not of a high standard
17 Noun A boundary that divides or keeps things apart
18 Verb To handle something skilfully
19 Adjective Describes something useful or effective

Down

- 2 Verb** To happen one after the other repeatedly
3 Noun The deliberate ending of a pregnancy, usually by a drug or medical operation
5 Noun The range of plant and animal life in a certain area
7 Noun To do with flying or aircraft
8 Noun A person who is concerned for his or her fellow human beings, especially as shown by kind and generous acts that benefit many people
9 Noun Belief that one can rely on someone or something
10 Verb Made polluted or dirty
12 Noun Something done to save money
14 Noun A meeting at which people exchange their views and opinions
15 Adjective Unconnected with religion

GLOSSARY

PRIZE COMPETITION *CONTINUED*

P H I L A N T H R O P I S T R E D
 R A M A N I P U L A T E S E A A R I
 A B U C H A N O I T C N U F L A M S
 C O R N D D E O V E L O P A U M E A
 T R O N T I K H I R L R I P C I F B
 I T F E T A N R E T L A T P E W T I
 C I O U A D V E R S A R I E S C Z L
 A O R I R N N N P U A G H A Y Q R I
 L N X G S R O T S E V N I L S M M T
 B R N O I T I T R A P N A R F B F I
 J U P C C A X Z S M F V M R R Q S E
 O G S U V P Y H Z V I Y S T R I G S
 V I D E T A N I M A T N O C C Z G J
 O T Z J E H Y M T Y T I R E T S U A
 Y Y F O G O M I W P N B W U H T F L
 M S M P Y G O T E L B O N G I W U P
 C U H E C N E D I F N O C X L X J K
 Y T I S R E V I D O I B A G X F I A

INSTRUCTIONS: ③ Find the crossword answers in the word search. Words can go vertically, horizontally, diagonally and back to front. ④ After solving the word search write down the unused letters, starting at the top left and reading from left to right, top to bottom to find the solution. **Hint** - The numbers of letters and words in the solution are shown under the word search.

COMPETITION PRIZES

Glossary Prize Winner

Paperback copy of '*Small Steps*' by
Louis Sachar

Glossary Prize Runner up

10 free issues of Newsademic

Sudoku Prize Winner

10 free issues of Newsademic

ISSUE NUMBER 128 PRIZE WINNERS

Glossary Competition

Christine Chung, Taiwan
Trisha Fernandez, Spain

Sudoku Competition

Eve Casteel, Argentina

Competition solution (three words with a total of 22 letters)

□□□□□□□□ □□□ □□□□□□□□□□□□ →

Go to www.newsademic.com log in and submit your solution by clicking on the "Enter competition" link within the Subscribers tools menu.

Deadline for receiving your entry is 10 pm on 21st October 2010 (GMT/UTC).

COMPETITION RULES:

1 Competition prizes are awarded on a per issue and not a per edition basis. 2 Only one entry per person per competition will be accepted. 3 You must obtain permission from your parent/guardian before entering if you are under 16 years of age. 4 Deadline for receiving entries is at 10 pm (GMT) on 21st October 2010. 5 The winners will be randomly selected from all correct entries received. 6 The winners will be contacted by E-mail. Newsademic's decision is final and no correspondence will be entered into. 7 Prizes must be taken as offered. There are no cash alternatives. 8 Newsademic does not accept any responsibility for lost or late entries due to the internet. Proof of submission is not proof of receipt. 9 Prizes won by those who have used a school subscription to enter will be awarded to the individual entrant and not to the school. 10 Competitions are not open to employees or contractors of Newsademic. 11 Newsademic reserves the right to cancel competitions at any stage, if in their opinion it is deemed necessary or if circumstances arise beyond their control. 12 These rules are governed by the laws of England and Wales. 13 When entering competitions entrants will be deemed to have accepted these rules and to agree to be bound by them.

SUDOKU COMPETITION

INSTRUCTIONS: ① Fill the boxes on each horizontal row with a number between 1 and 9. ② Fill the boxes on each vertical row with a number between 1 and 9. ③ Make sure that each number between 1 and 9 also appears in each highlighted 3 x 3 square box. ④ After solving the Sudoku puzzle write down the numbers from the tinted vertical column from top to bottom in the boxes below.

Competition Solution

□□□□□□□□□

		5			1			
8	2	1						
			8		7	5		
				3		2	5	
		3	4					
4				2	6			
	6	8				1		
	4			1				
			6		8	9		2